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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,536	07/26/2006	Siegbert Steinlechner	3691	8899

7590  
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103 East Neck Road  
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EXAMINER
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HUYNH, PHUONG

ART UNIT	PAPER NUMBER
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2857

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08/06/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,536	<b>Applicant(s)</b> STEINLECHNER, SIEGBERT	
	<b>Examiner</b> PHUONG HUYNH	<b>Art Unit</b> 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8, 10, 11 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Objections*

1. Claim 8 is objected to under 37 CFR 1.75(i) because these claims set forth a plurality of elements/steps, each elements/steps of the claims should be separated by a line indentation.

- Claim 8 is objected to because of the following informalities:

-Limitation "Parameters of an ellipse ( $w_1...w_5$ )" in claim 8 is objected to because it is unclear of what kind of parameters of an ellipse are and unclear of what their range is.

-Variables  $x$ ,  $y$ ,  $x_i'$ ,  $y_i'$  throughout claim 8 is objected to because they are undefined.

- Claim 10 is objected to because variables " $x'$  and  $y$ " lack proper antecedent basis. There is insufficient support for the limitation/ variables. Further, they are undefined.
- Claim 15 is objected to because " $s_{x1}-s_{x4}$ ;  $s_{y1}-s_{y4}$ " lack proper antecedent basis and that it is unclear of what their range is.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Gotz (USPN. 5,612,906).

Regarding claims 8 and 12, Gotz discloses A method for correcting a sensor system selected from the group consisting of an angle-measuring sensor system, a distance-measuring sensor system, and an angle-and a distance measuring sensor system comprising the steps of evaluating sinusoidal and cosinusoidal measurement signals ( $x_i$   $y_i$ ) obtained by scanning a moved measurement object in a magnetic field [see Gotz: col. 4, lines 9-42]; correcting errors of the measurement signals ( $x_i$   $y_i$ ) selected from the group consisting of a angle errors, phase errors, and angle and phase errors; providing for the correcting the sensor system a compensation process and a subsequent correction process [see Gotz: col. 4, line 44-col. 5, line 20];

in the compensation process, providing offset values ( $x_0$ ,  $y_0$ ) from a specified number ( $N$  of  $j=1 \dots N$ ) of pairs of measured values ( $x_i$   $y_i$ ) obtained by rotating a magnetic field, *for the sinusoidal and cosinusoidal measurement*

signals  $(x_i, y_i)$  and correction parameters  $(m_1, m_2)$  by applying a least square of errors method and solving a linear system of equations [see Gotz: col. 5, lines 10-65; and col. 6, lines 1-27]; determining a corrected pair of measured values  $(x'_i, y'_i)$  from each pair of the measured values  $(x_i, y_i)$  in the correction process, whereby determining the corrected pair of the measured values  $(x'_i, y'_i)$  in the correction process based on the relationship

$x'_i = x_i - x_0$  and  $y'_i = m_1 \cdot x'_i + m_2(y_i - y_0)$ , [see Gotz: col. 5, lines 10-45; and col. 6, lines 22-50]

whereby determining the pair of measured values  $(x_i, y_i)$  in the compensation process located on ellipses and satisfying the following equation:

$$f(x, y) = w_1 \cdot x^2 + 2 \cdot w_2 \cdot x \cdot y + w_3 \cdot y^2 + 2 \cdot w_4 \cdot x + 2 \cdot w_5 \cdot y - 1, \quad \text{whereby}$$

determining parameters of ellipses  $(w_1, \dots, w_5)$  using the least square of errors (g) method [see col. 5, lines 10-45: the method of least squares error], with

$$g = \sum_{i=1}^N f(x_i, y_i)^2 = \min \quad [\text{see Gotz: col. 6, line 51-col. 7, line 27}];$$

and determining an angle  $(\alpha)$  to be measured from particular corrected pairs of the measured values  $(x'_i, y'_i)$  using an algorithm [see Gotz: col. 5, lines 35-65 and col. 6, lines 20-50].

Regarding claims 10, Gotz discloses that determining an angle  $(\alpha)$  to be measured in the correction process based on the relationship  $\alpha = \arctan(y'/x')$  [see Gotz: col. 5, lines 35-65 and col. 6, lines 1-18].

Regarding claim 11, Gotz discloses that determining a derivative of the square of errors (g) with respect to the parameters of the ellipse ( $w_1 \dots w_5$ ) and setting a particular derivative equal to zero, to determine a minimum, and using the particular derivatives to create a linear system of equations, so that, using a suitable elimination process, the system of equations is solved for required parameters of the ellipse and the offset values ( $x_0, y_0$ ) and the correction parameters ( $m_1, m_2$ ) are determined [see Gotz: col. 6, line 51-col. 7, line 26].

#### ***Allowable Subject Matter***

4. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

5. Applicant's arguments, see Applicant's Remarks, filed 05/05/2008, with respect to rejections of claims 8-14, under 35 USC 112, 2<sup>nd</sup> paragraph; and rejection of claims 12-14 under 35 USC 101 (claims 12-14 are currently cancelled) have been fully considered and are persuasive. The rejections of claims 8-14 under 35 USC 112, 2<sup>nd</sup> paragraph; and rejection of claims 12-14 under 35 USC 101 have been withdrawn.

6. Applicant's arguments filed 05/05/2008 with respect to the rejections of claim 8 under 35 USC 102(b) have been fully considered but they are not persuasive.

7. Applicant argues that "Gotz does not disclose "the correction parameters (m1, m2)" see Applicant's Remarks: Page 7]; and that the new limitation, which is limitation of claim 9 which is currently incorporated into claim 8 is not disclosed by Gotz [see Applicant's Remarks: Pages 8-10].

8. Accordingly, Gotz discloses "the correction parameters (m1, m2)" [see Gotz: col. 5, lines 10-45; and col. 6, lines 22-50] and the limitation "determining an angle ( $\alpha$ ) to be measured from particular corrected pairs of the measured values ( $x'_i$   $y'_i$ ) using an algorithm [see Gotz: col. 5, lines 35-65 and col. 6, lines 20-50].

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUONG HUYNH whose telephone number is (571)272-2718. The examiner can normally be reached on M-F: 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phuong Huynh  
Examiner  
Art Unit 2857

/Phuong Huynh/  
Examiner, Art Unit 2857  
August 1, 2008

/Eliseo Ramos-Feliciano/  
Supervisory Patent Examiner, Art Unit 2857